

**IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

In re Application of

von Deyn et al.

Serial No. 09/091,300

Filed: January 08, 1998 as PCT international application

Priority: January 17, 1997

For: 3-Heterocyclyl-substituted benzoyl derivatives

**DECLARATION**

I, Matthias Christian Witschel, a doctor of natural sciences, a citizen of the Federal Republic of Germany and residing at 81, Wittelsbachstrasse, 67061 Ludwigshafen, Germany, declare as follows:

I am a fully trained chemist, having studied chemistry at the University of Erlangen-Nuremberg, Germany, from 1985 to 1994;

I was awarded my doctor's degree by the University of Erlangen-Nuremberg in 1994;  
I was a post-doctoral fellow at the Stanford University from 1994 to 1995;

Since 1996, when I joined BASF Aktiengesellschaft of 67056 Ludwigshafen, Germany, I have been engaged in the synthesis of herbicides and herbicide screening;

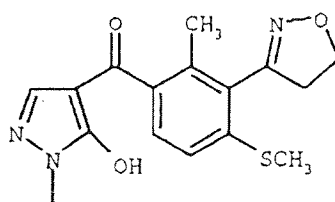
I am one of the inventors of the invention disclosed and claimed in Application No. 09/091,300 and therefore I am familiar with the field to which the said application relates. I have studied the Office Action that has issued in this case and read the references cited therein.

In order to show the herbicidal action of the inventive 3-heterocyclyl-substituted benzoyl derivatives I according to application Serial No. 09/091,300 I carried out experiments as described in Application Ser. No. 09/091,300 (see page 159, line 16 to page 160, line 9). The plants used in these experiments belong to the following species:

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Scientific name	Common name
<i>Abutilon theophrasti</i>	Velvetleaf
<i>Alopecurus myosuroides</i>	Blackgrass
<i>Amaranthus retroflexus</i>	Pigweed
<i>Avena fatua</i>	Wild oat
<i>Chenopodium album</i>	Lambsquarters
<i>Echinochloa crus-galli</i>	Barnyardgrass
<i>Galium aparine</i>	Catchweed
<i>Ipomoea</i> ssp.	Momingglory
<i>Polygonum persicaria</i>	Ladysthumb
<i>Setaria faberi</i>	Giant foxtail
<i>Setaria viridis</i>	Green foxtail
<i>Sinapis alba</i>	White mustard
<i>Solanum nigrum</i>	Black nightshade
<i>Triticum aestivum</i>	Winter wheat
<i>Veronica</i> ssp.	Speedwell
<i>Zea mays</i>	Corn

**Table 1:** Herbicidal action of compound A of the present invention at an application rate of 500 and 250 g/ha of active ingredient (post emergence treatment in greenhouse)

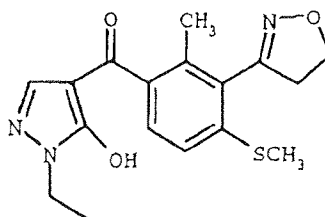


A

Application rate	500 g/ha	250 g/ha
	Damage [%]	
<i>Chenopodium album</i>	100	100
<i>Echinochloa crus-galli</i>	90	90
<i>Polygonum persicaria</i>	100	98
<i>Setaria viridis</i>	100	98
<i>Solanum nigrum</i>	95	95

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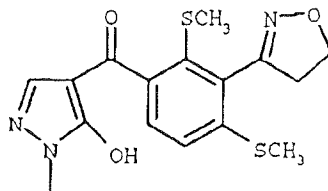
**Table 2:** Herbicidal action of compound B of the present invention at an application rate of 125 and 62.5 g/ha of active ingredient (post emergence treatment in greenhouse)



B

Application rate	125 g/ha	62.5 g/ha
	Damage [%]	
Chenopodium album	100	100
Polygonum persicaria	100	100
Setaria faberi	85	85
Setaria viridis	98	95

**Table 3:** Herbicidal action of compound C of the present invention at an application rate of 500 and 250 g/ha of active ingredient (post emergence treatment in greenhouse)

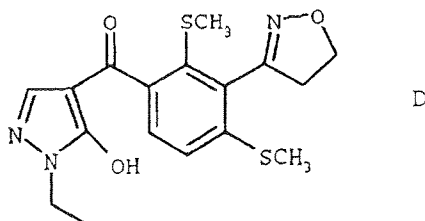


C

Application rate	500 g/ha	250 g/ha
	Damage [%]	
Amaranthus retroflexus	95	95
Chenopodium album	98	98
Ipomoea ssp.	100	95
Polygonum persicaria	98	98
Setaria faberi	95	95
Setaria viridis	100	100

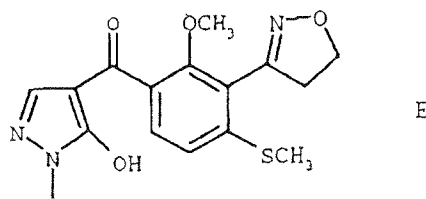
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**Table 4:** Herbicidal action of compound D of the present invention at an application rate of 500 and 250 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	500 g/ha	250 g/ha
	Damage [%]	
Chenopodium album	98	98
Ipomoea ssp.	100	95
Setaria faberi	95	95
Setaria viridis	100	100
Sinapis alba	98	98

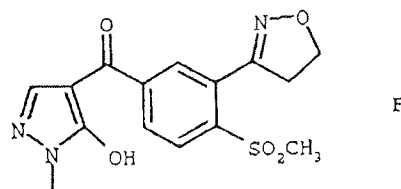
**Table 5:** Herbicidal action of compound E of the present invention at an application rate of 500 and 250 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	500 g/ha	250 g/ha
	Damage [%]	
Chenopodium album	95	95
Echinochloa crus-galli	90	90
Setaria viridis	95	95
Setaria faberi	95	95

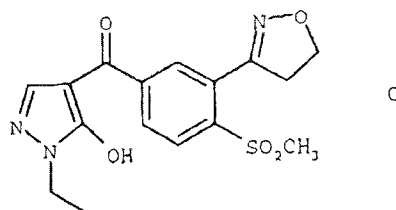
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**Table 6:** Herbicidal action of compound F of the present invention at an application rate of 500 and 250 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	500 g/ha	250 g/ha
	Damage [%]	
<b>Crop Plant</b>		
Triticum aestivum	0	0
<b>Unwanted Plants</b>		
Chenopodium album	95	95
Echinochloa crus-galli	90	90
Polygonum persicaria	95	95
Setaria faberi	90	90

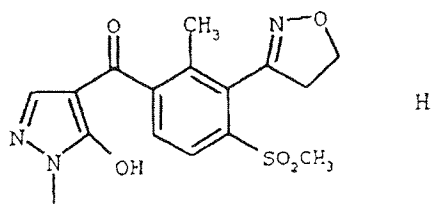
**Table 7:** Herbicidal action of compound G of the present invention at an application rate of 500 and 250 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	500 g/ha	250 g/ha
	Damage [%]	
<b>Crop Plant</b>		
Zea mays	0	0
<b>Unwanted Plants</b>		
Chenopodium album	100	100
Echinochloa crus-galli	90	90
Polygonum persicaria	98	90
Solanum nigrum	95	95

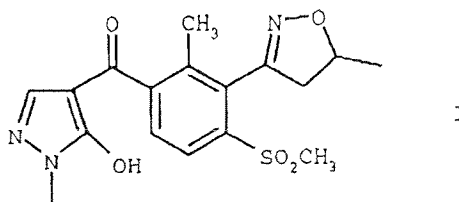
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**Table 8:** Herbicidal action of compound H of the present invention at an application rate of 125 and 62.5 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	125 g/ha	62.5 g/ha
	Damage [%]	
Amaranthus retroflexus	95	95
Chenopodium album	100	100
Ipomoea ssp.	100	100
Polygonum persicaria	98	98
Setaria viridis	98	98

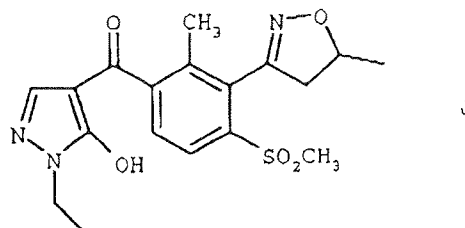
**Table 9:** Herbicidal action of compound I of the present invention at an application rate of 125 and 62.5 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	125 g/ha	62.5 g/ha
	Damage [%]	
Chenopodium album	100	100
Polygonum persicaria	100	100
Setaria viridis	95	90
Sinapis alba	98	95
Veronica ssp.	95	95

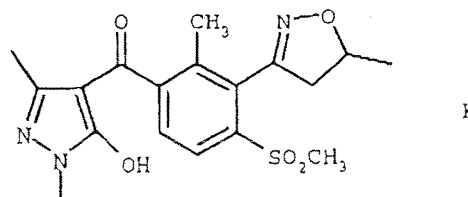
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**Table 10:** Herbicidal action of compound J of the present invention at an application rate of 125 and 62.5 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	125 g/ha	62.5 g/ha
	Damage [%]	
Amaranthus retroflexus	100	100
Avena fatua	95	90
Chenopodium album	98	98
Polygonum persicaria	100	100
Sinapis alba	98	98

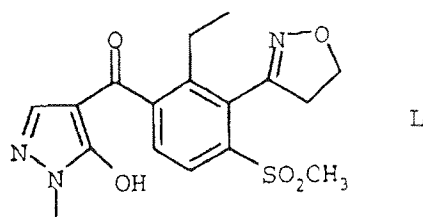
**Table 11:** Herbicidal action of compound K of the present invention at an application rate of 125 and 62.5 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	125 g/ha	62.5 g/ha
	Damage [%]	
Chenopodium album	100	100
Ipomoea ssp.	95	90
Polygonum persicaria	100	100
Setaria viridis	90	90
Solanum nigrum	90	90

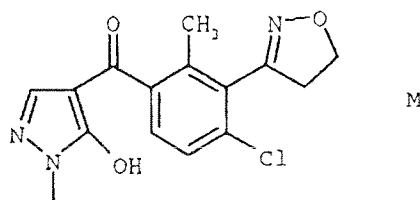
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**Table 12:** Herbicidal action of compound L of the present invention at an application rate of 500 and 250 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	500 g/ha	250 g/ha
	Damage [%]	
Abutilon theophrasti	95	95
Chenopodium album	100	100
Ipomoea ssp.	100	100
Setaria viridis	95	95
Sinapis alba	98	98

**Table 13:** Herbicidal action of compound M of the present invention at an application rate of 500 and 250 g/ha of active ingredient (post emergence treatment in greenhouse)

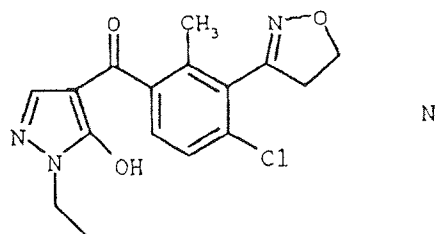


Application rate	500 g/ha	250 g/ha
	Damage [%]	
Chenopodium album	100	100
Polygonum persicaria	100	100
Setaria faberii	95	95
Sinapis alba	100	100
Solanum nigrum	98	98



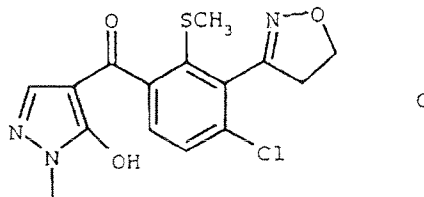
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**Table 14:** Herbicidal action of compound N of the present invention at an application rate of 500 and 250 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	500 g/ha	250 g/ha
	Damage [%]	
Chenopodium album	100	100
Gallum aparine	95	95
Polygonum persicaria	100	100
Setaria viridis	95	90
Solanum nigrum	100	98

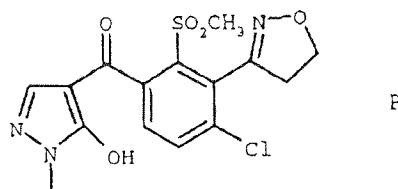
**Table 15:** Herbicidal action of compound O of the present invention at an application rate of 500 and 250 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	500 g/ha	250 g/ha
	Damage [%]	
Alopecurus myosuroides	95	95
Amaranthus retroflexus	100	100
Polygonum persicaria	100	100
Setaria viridis	100	98
Veronica ssp.	100	100

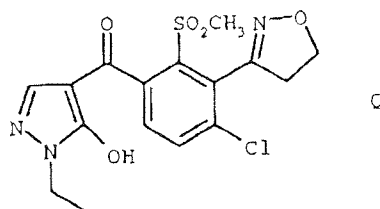
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**Table 16:** Herbicidal action of compound P of the present invention at an application rate of 250 and 125 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	250 g/ha	125 g/ha
	Damage [%]	
Chenopodium album	100	100
Ipomoea ssp.	90	90
Polygonum persicaria	100	98
Setaria faberi	90	85

**Table 17:** Herbicidal action of compound Q of the present invention at an application rate of 250 and 125 g/ha of active ingredient (post emergence treatment in greenhouse)



Application rate	250 g/ha	125 g/ha
	Damage [%]	
Chenopodium album	100	100
Polygonum persicaria	95	95
Setaria faberi	85	85
Solanum nigrum	95	90

The tables 1 to 17 clearly demonstrate that the compounds according to application Serial No. 09/091,300 are suitable for controlling unwanted plants.

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I further declare that all statements made herein of my own knowledge are true and that all statements made on information or belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at 67056 Ludwigshafen, Germany, this 21 day of October, 1999.

Matthew White

Signature of Declarant